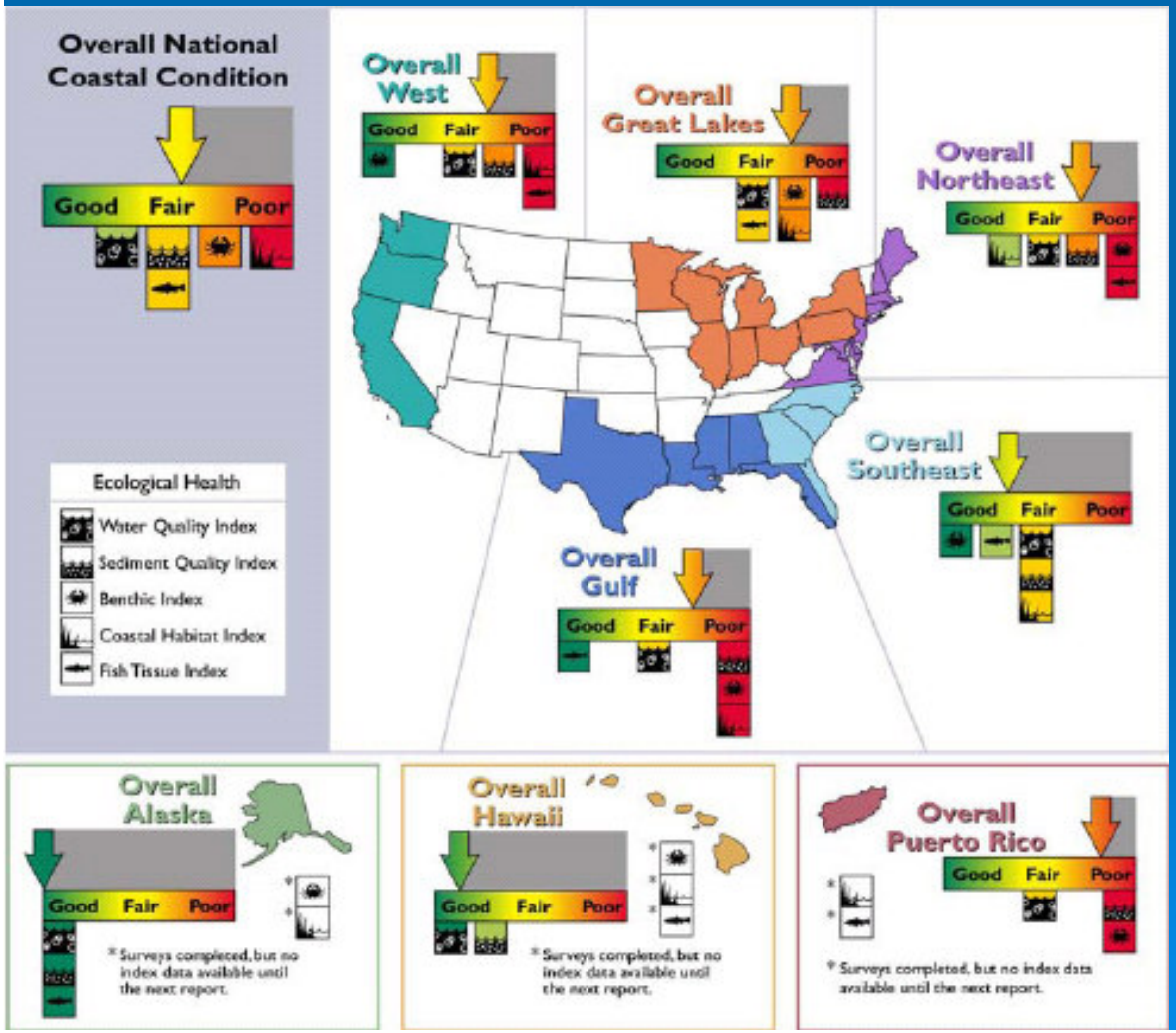
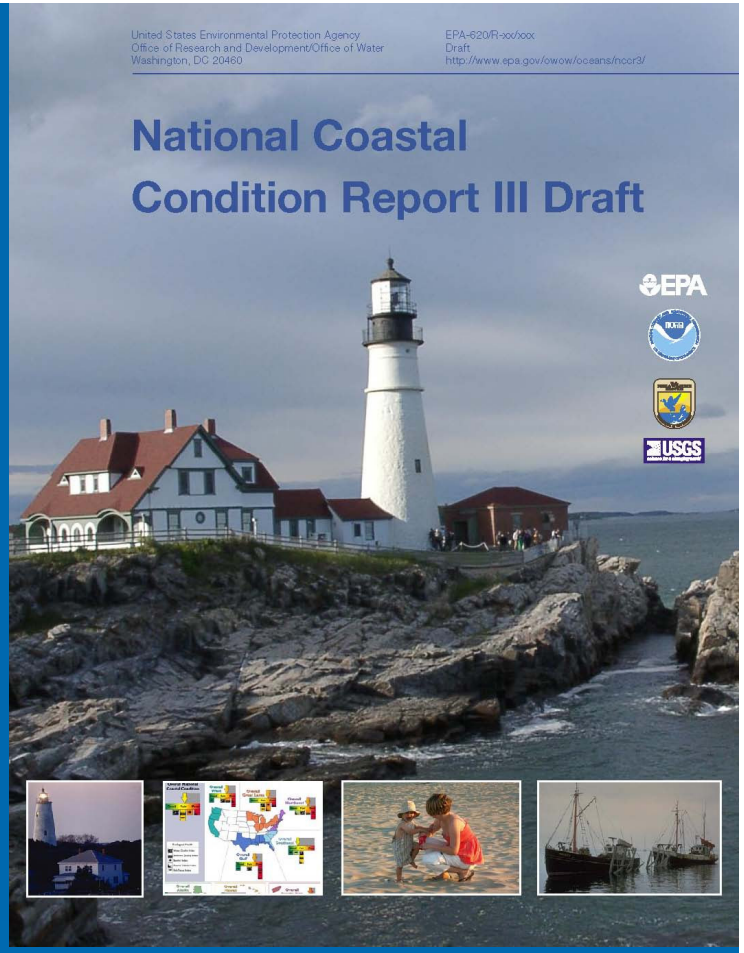
Indicator Development: National Coastal Condition Report

Barry Burgan
EPA Office of Oceans, Wetlands, and Watersheds

National Coastal Condition Report Indicators





Indicator Development and Selection Criteria

- Temporal and spatial scale
- Easily replicated
- Index period stability
- Low year-to-year variation
- Regionally referenced
- Measure environmental impact
- Rolled-up or indexed
- Monitoring in place for underlying data
- Re-evaluate and modify indicators as necessary

Indicator Type	Indicator
Exposure	Nutrients
	Sediment Contaminants
	Sediment Toxicity
	Dissolved Oxygen concentration
	Contaminants in fish and shellfish
Response	Benthic community composition
	Benthic abundance
	Fish community composition
	Fish Pathology
Habitat	Percent light transmittance
	Salinity, temperature, pH
	Percent silt-clay

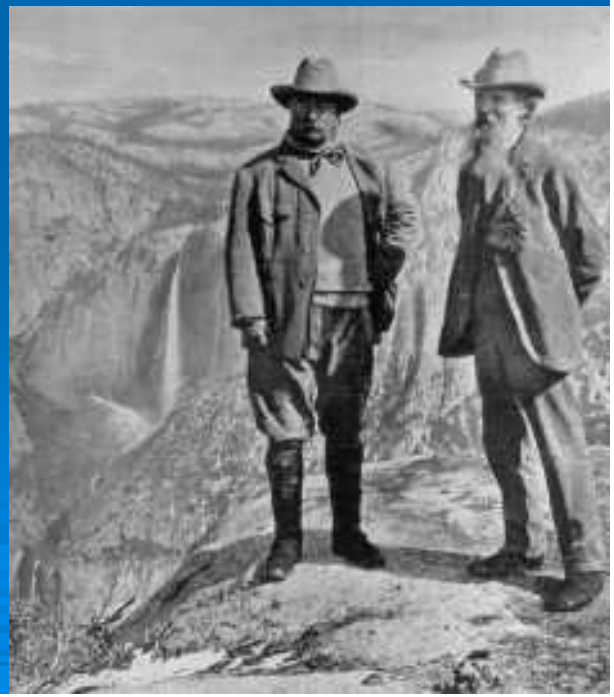
Use of Indicators: Examples from the National Park System

Sarah Allen
National Park Service - Point Reyes
National Seashore

National Park Service, Department of Interior

Yellowstone first National Park established in 1872

- Today 390 National Park System units: 75 ocean parks
  - Protect 34 million acres of coastal habitats
  - 40 parks contain 3.2 million acres submerged lands
  - 5,100 miles of shoreline
  - 11 marine Wilderness areas
- Ocean parks host 75 million visits a year
- Generate $2.5 billion in local economies
- Support 57,569 local jobs



Ocean Park Action Plan

- National Ocean Park Task Force
- Create a seamless network of ocean parks, sanctuaries, refuges, and reserves
- Explore, map and protect ocean parks
- Engage visitors in ocean park stewardship
- Increase NPS technical capacity for ocean research and stewardship
  - Ocean Branch to National Program to coordinate interagency and intra-park

http://www.nps.gov/pub_aff/oceans/programs.htm

National Park Service
13 Networks of coastal parks

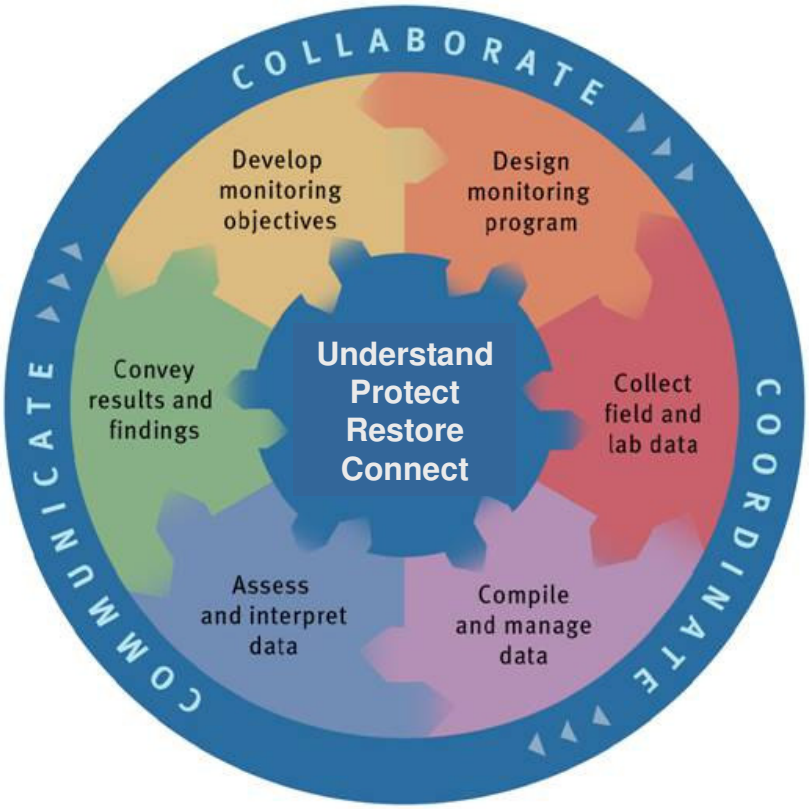
Programs

Inventory and Monitoring
Coral Reefs monitoring
Coastal Geology
Maritime Heritage
Submerged cultural resources
Science Centers
Cooperative ecological study units

Indicators of coastal parks

Air Resources
Water Resources
Shoreline change
Biological indicators
Social science – visitation; natural sounds

Monitoring Goals



- Determine status and trends of indicators of park resources.
- Provide early warning of abnormal conditions.
- Understand the dynamic nature of park ecosystems and provide reference points to altered environments.
- Meet legal mandates for resource protection and visitor enjoyment.
- Provide measures of progress towards achieving goals.

Indicator Development and Support: Role of Federal Partnerships

Ralph Cantral
NOAA Office of Ocean and Coastal Resource Management

NOAA Indicators and Data Overview

- Multiple indicators with varying spatial and temporal coverage, supported by various monitoring programs
- National-scale indicators to support direct management use as well as environmental statistics reporting
- Regional- or local-scale indicator support
  - Indicator development and data acquisition
  - Indicators as integrated into assessments
- *Most NOAA indicators are based on partnerships with other federal agencies, state agencies, or universities*

Federal-state/local Partnerships

Mechanisms

- Established monitoring programs – e.g. NERRS System-Wide Monitoring Program
- Request/Requirement on state programs – e.g. State CZM programs requested to report on number of public access sites in coastal zone

Issues

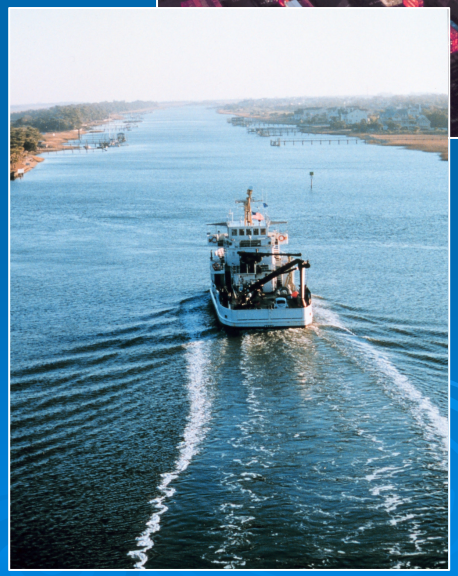
- Lack of guaranteed support for long-term monitoring programs
- Lack of coordination between federal agencies to share data with non-federal partners; lack of recognition of more localized data needs

Ideas for Improvements

- Institutionalize and streamline indicators that have direct management use
- Determine federal/state/local management needs and coordinate federal programs and data to support
- Determine data gaps that prohibit tracking key indicators and coordinate federal and non-federal partners to address gaps

Ideas of Improvement

- Build in mechanism for periodic user or audience feedback to ensure indicators remain useful over time
  - NCCR indicators have evolved since 2001 with the input from other federal, state, NEP and public
- Consider socioeconomic and ecological indicators to move toward a more comprehensive assessment of coastal resources, uses, and values

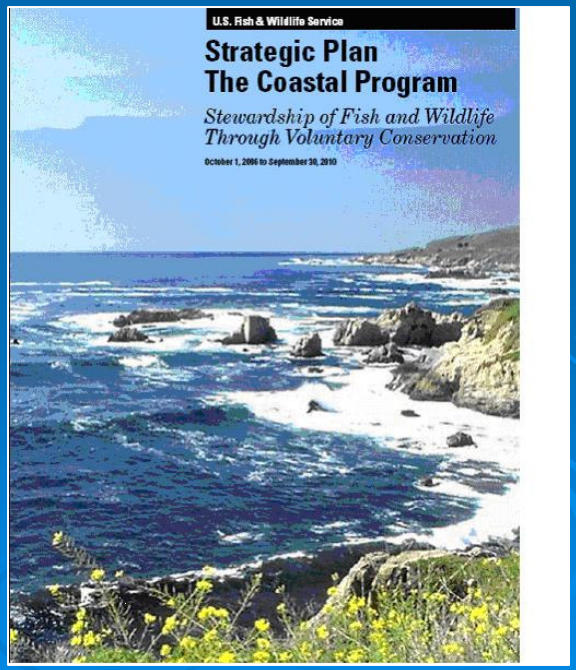


Indicator Tracking: Organizational Influences and Limitations

David Gordon
USFWS Branch of Habitat Restoration

Organizational Factors

- Mission and priorities
- Legal mandates and authorities
- Internal versus external needs
- Accountability
- Uncertainty



Organizational Capability

- Will and desire
- Lack of understanding
- Consensus on what is needed
- Capacity
- Structure and management
- Funding

Data Management

- Collection
- Storage
- Analysis
- Dissemination
- Updates and quality
- Long-term commitment